

CLAIMS

What is claimed is:

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A1
1. A computer peripheral input system with two input types, comprising:

a first input module serving for inputting at least a first input data and generating a first input signal corresponding thereto;

10 a second input module serving for inputting at least a second input data and generating a second input signal corresponding thereto; and

control means having a communication interface installed therein, said control means serving for reading and processing said first input signal and said second input signal, and then storing a first and second information respectively corresponding thereto, wherein said first information represents said first input data and said second information represents said second input data; and said communication interface serving for sending said first information and said second information stored in said control means to a computer host by a polling method.

2. The computer peripheral input system of claim 1, wherein said first input module comprises a keyboard.

25 3. The computer peripheral input system of claim 1, wherein said second input module comprises a digitizer tablet system.

4. The computer peripheral input system of claim 3, wherein

said digitizer tablet system comprises a digitizer tablet and a plurality of pointing devices.

5 5. The computer peripheral input system of claim 4, wherein said pointing devices comprise a cordless pen, a cordless mouse and a puck.

10 6. The computer peripheral input system of claim 3, further comprising a signal processing unit for transforming said second input signal to a first digital signal and a second digital signal, wherein said first digital signal is processed to a pressure data /or a button status data corresponding to said second input data, and said second digital signal is processed to a coordinate data corresponding to said second input data, by said control means.

15 7. The computer peripheral input system of claim 6, wherein said signal processing unit comprises amplifier and filter circuits for amplifying said second input signal and eliminating noises.

20 8. The computer peripheral input system of claim 6, wherein said signal processing unit comprises pressure signal waveform generation circuits for generating said first digital signal.

25 9. The computer peripheral input system of claim 8, further comprising a counter for determining a frequency of said first digital signal.

10. The computer peripheral input system of claim 8, wherein said pressure signal waveform generation circuits comprise a

comparator circuit.

11. The computer peripheral input system of claim 10, wherein said first digital signal is a clock.

12. The computer peripheral input system of claim 6, wherein said signal processing unit comprises position signal waveform generation circuits and an analog to digital convert circuit for generating said second digital signal.

13. The computer peripheral input system of claim 12, wherein said position signal waveform generation circuits comprise a rectifier circuit and a peak detector circuit.

14. The computer peripheral input system of claim 1, wherein said control means comprises a micro-controller.

15. The computer peripheral input system of claim 1, wherein said communication interface comprises a universal serial bus interface (USB interface).

16. The computer peripheral input system of claim 15, wherein said universal serial bus interface has an endpoint 0 and an endpoint 1.

17. The computer peripheral input system of claim 2, further comprising a keyboard light emitting diode indicator.

18. The computer peripheral input system of claim 4, further

comprising a tablet light emitting diode indicator.

19. A computer peripheral input system with two input types, comprising

5 a keyboard device serving for inputting at least a first input data and generating a first input signal corresponding thereto, said first input data representing an actuated key data;

a digitizer tablet device serving for inputting at least a second input data and generating a second input signal corresponding thereto;

10 a signal processing unit for transforming said second input signal to a first digital signal and a second digital signal, wherein said first digital signal corresponds to a pressure data /or a button status data of said second input data, and said second digital signal corresponds to a coordinate data of said second input data; and

15 control means having a communication interface installed therein, said control means serving for reading and processing said first input signal and both of said first digital signal and said second digital signal corresponding to said second input signal, wherein said first input signal is processed to said actuated key data, said first digital
20 signal is processed to said pressure data /or said button status data, said second digital signal is processed to said coordinate data, and said actuated key data, said pressure data /or said button status data and said coordinate data are stored in said control means; and said
25 communication interface serving for sending said actuated key data, said pressure data /or said button status data and said coordinate data stored in said control means to a computer host by a polling method.

20. The computer peripheral input system of claim 19, wherein

said digitizer tablet device comprises a digitizer tablet and a plurality of pointing devices.

21. The computer peripheral input system of claim 20, wherein
5 said pointing devices comprise a cordless pen, a cordless mouse and a puck.

22. The computer peripheral input system of claim 19, wherein
10 said signal processing unit comprises pressure signal waveform generation circuits, position signal waveform generation circuits and an analog to digital convert circuit, wherein said pressure signal waveform generation circuits are served for transforming said second input signal to a first digital signal, and said position signal waveform generation circuits and said analog to digital circuit are served for transforming said
15 second input signal to said second digital signal.

23. The computer peripheral input system of claim 22, wherein
20 said pressure signal waveform generation circuits comprise a comparator circuit.

24. The computer peripheral input system of claim 23, wherein
said first digital signal is a clock.

25. The computer peripheral input system of claim 22, wherein
25 said signal processing unit further comprising a frequency counter for counting frequency of said first digital signal.

26. The computer peripheral input system of claim 22, wherein

said position signal waveform generation circuits comprise a rectifier circuit and a peak detector circuit.

27. The computer peripheral input system of claim 19, wherein
5 said control means comprises a micro-controller.

28. The computer peripheral input system of claim 19, wherein
said communication interface comprises a universal serial bus interface
(USB interface).

29. The computer peripheral input system of claim 28, wherein
said universal serial bus interface has an endpoint 0 and an endpoint 1.

30. A data communication method of a computer peripheral
15 input system with two input types, said computer peripheral input
system comprising a keyboard device, a digitizer tablet device including
a plurality of pointing devices and control means having a
communication interface installed therein, said control means reading
and processing input data of said keyboard device and said digitizer
20 tablet device and storing them, the processed input data being sent to a
computer host through said communication interface, said data
communication method comprising:

proceeding handshaking action between said communication
interface and said control means such that said communication
25 interface detects respective identifiers (ID) of said keyboard device and
each of said pointing devices setting in said control means, and said
communication interface providing a respective output address for each
said respective identifier;

clearing and planning a data memory of said control means to provide a predetermined memory region in said data memory for storing input data corresponding to each said respective identifier (ID);

5 setting input data of said keyboard device as a first priority sent data of said communication/ interface;

reading input data of said keyboard device and storing the input data in said corresponding predetermined memory region;

10 reading input data of said digitizer tablet device in sequence according to the order of said respective identifiers (ID) of said pointing devices and storing the input data in said predetermined memory regions corresponding to said respective identifiers of said pointing devices; and

15 polling input data stored in said control means by said communication interface; when there is input data of said keyboard device stored in said control means, said communication interface sends the input data through said output address corresponding to said respective identifier (ID) of said keyboard device, and returning to the step of reading input data of said keyboard device; when there is not input data of said keyboard device stored in said control means, said
20 communication interface polls input data of said digitizer tablet device, when there is input data of said digitizer tablet device stored in said control means, said communication interface sends the input data of said digitizer tablet through said output addresses corresponding said respective identifiers (ID) of said pointing devices to the computer host
25 according to the order of said respective identifiers of said pointing devices, and returning to the step of reading input data of said keyboard device, when there is not input data of said digitizer tablet device stored in said control means, returning to the step of reading input data of said

keyboard device.

31. The data communication method of claim 30, wherein said pointing devices comprise a cordless pen, a cordless mouse and a puck.

32. The data communication method of claim 30, wherein said control means comprises a micro-controller.

33. The data communication method of claim 30, wherein said communication interface comprises a universal serial bus interface (USB interface).

34. The data communication method of claim 33, wherein said universal serial bus interface (USB interface) has an endpoint 0 and an endpoint 1.

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